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ConocoPhillips Company - I. P. Legal			EXAMINER	
P.O. Box 2443			FIORITO, JAMES	
Bartlesville, OK 74005			ART UNIT	PAPER NUMBER
			1754	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/687,140

Applicant(s)

JIN ET AL.

Examiner

James A. Fiorito

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,20-70 and 73-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,20-70 and 73-92 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/04, 3/04, 6/04, 7/04, 1/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, and 20-41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Noweck US 6773690.**

Noweck teaches a method of making a stabilized transition alumina catalyst support (Column 4 Lines 25-29) comprising: (a) introducing to a transition alumina at least one structural stabilizer precursor to provide a stabilizer-impregnated alumina (Column 3 Lines 13-20); (b) optionally, drying the stabilizer-impregnated alumina; (c) steaming the stabilizer-impregnated alumina at conditions sufficient to at least partially transform the stabilizer-impregnated alumina to a stabilizer-containing boehmite alumina (Column 2 Lines 47-62); and (d) calcining the stabilizer-containing boehmite alumina (Column 3 Lines 40-50).

**Claims 1, 20-31, and 33-41 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murrell US 4831007.**

Murrell teaches a method of making a stabilized transition alumina catalyst support (Abstract) comprising: (a) introducing to a transition alumina at least one structural stabilizer precursor to provide a stabilizer-impregnated alumina (Column 3 Lines 9-15); (b) optionally, drying the stabilizer-impregnated alumina (Example 1); (c) steaming the stabilizer-impregnated alumina at conditions sufficient to at least partially transform the stabilizer-impregnated alumina to a stabilizer-containing boehmite alumina (Column 3 Lines 25-30); and (d) calcining the stabilizer-containing boehmite alumina (Column 3 Lines 9-15).

**Claims 42-48, 60-66, and 75-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noweck US 6773690 as applied to claim 1, and 20-41 above, and further in view of Watcher US 6531517.**

Noweck does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated

support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides.

Watcher teaches a method of preparing a Fischer-Tropsch catalyst (Column 1 Lines 9-12) comprising: introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; drying the catalyst-impregnated support at conditions effective for removing any solvents used in catalytic metal precursor and calcining the catalyst-impregnated support at conditions effective for decomposing the catalytic metal precursor to the corresponding oxide (Column 2 Lines 35-50).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Noweck to include the method of preparing a Fischer-Tropsch catalyst comprising: introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; drying the catalyst-impregnated support at conditions effective for removing any solvents used in catalytic metal precursor and calcining the catalyst-impregnated support at conditions effective for decomposing the catalytic metal precursor to the corresponding oxide in view of the teaching of Watcher. The suggestion or motivation for doing so would have been to increase the activity of catalysts for conducting hydrogenation reaction, particularly carbon monoxide hydrogenation reactions, and

especially Fischer-Tropsch reactions (Column 1 Lines 9-12). The process of Watcher requires a catalyst support preferably made from alumina (Column 4 Lines 60).

Therefore, one of ordinary skill in the art would be motivated to use the support of Noweck in the process of Watcher.

**Claims 42-48, 60-66, 75-79, and 81-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murrell US 4831007 as applied to claim 1, 20-31, and 33-41 above, and further in view of Watcher US 6531517.**

Murrell does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides.

Watcher teaches a method of preparing a Fischer-Tropsch catalyst (Column 1 Lines 9-12) comprising: introducing at least one catalytic metal precursor to a stabilized

transition alumina catalyst support to provide a catalyst-impregnated support; drying the catalyst-impregnated support at conditions effective for removing any solvents used in catalytic metal precursor and calcining the catalyst-impregnated support at conditions effective for decomposing the catalytic metal precursor to the corresponding oxide (Column 2 Lines 35-50).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Murrell to include the method of preparing a Fischer-Tropsch catalyst comprising: introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; drying the catalyst-impregnated support at conditions effective for removing any solvents used in catalytic metal precursor and calcining the catalyst-impregnated support at conditions effective for decomposing the catalytic metal precursor to the corresponding oxide in view of the teaching of Watcher. The suggestion or motivation for doing so would have been to increase the activity of catalysts for conducting hydrogenation reaction, particularly carbon monoxide hydrogenation reactions, and especially Fischer-Tropsch reactions (Column 1 Lines 9-12). The process of Watcher requires a catalyst support preferably made from alumina (Column 4 Lines 60). Therefore, one of ordinary skill in the art would be motivated to use the support of Murrell in the process of Watcher.

**Claims 1, 20-70, and 73-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noweck US 6773690 as applied to claims 1, and 20-41 above, and further in view of WO 03/012008.**

Noweck does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture.

WO '008 teaches a method for preparing a Fischer-Tropsch catalyst (Abstract) comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (Page 5 Lines 20-25) (b) introducing at least one cocatalytic metal precursor to the catalyst-



impregnated support to provide a cocatalyst-impregnated support; (Example 1) (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (Page 3) (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides (Page 3). Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture (Page 7 Lines 1-10).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Noweck to include a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e)

calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides.

Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture in view of the teaching of WO '008. The suggestion or motivation for doing so would have been to obtain a clean wax product containing less than 50 mass ppm submicron particulates of cobalt (Abstract). The process of WO '008 requires a catalyst support preferably made from alumina with a metal modifier (Page 3). Therefore, one of ordinary skill in the art would be motivated to use the support of Noweck in the process of WO '008.

**Claims 1, 20-31, 33-70, 73-79, and 81-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murrell US 4831007 as applied to claims 1, 20-31, and 33-41 above, and further in view of WO 03/012008.**

Murrell does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated

support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture.

WO '008 teaches a method for preparing a Fischer-Tropsch catalyst (Abstract) comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (Page 5 Lines 20-25) (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (Example 1) (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (Page 3) (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides (Page 3). Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor

effective for at least partially transforming the synthesis gas to the product mixture  
(Page 7 Lines 1-10).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Murrell to include a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture in view of the teaching of WO '008. The suggestion or motivation for doing so would have been to obtain a clean wax product containing less than 50 mass ppm submicron particulates of cobalt (Abstract). The process of WO '008 requires a catalyst support preferably made from alumina with

a metal modifier (Page 3). Therefore, one of ordinary skill in the art would be motivated to use the support of Murrell in the process of WO '008.

**Claims 1, 20-70, and 73-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noweck US 6773690 as applied to claims 1, and 20-41 above, and further in view of WO 01/76735.**

Noweck does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture.

WO '735 teaches a method for preparing a Fischer-Tropsch catalyst (Abstract) comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (Page 1) (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (Page 3) (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (Page 4 Lines 18-20) (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides (Page 4 Lines 12-17). Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture (Table 1).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Noweck to include a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) introducing at least one

promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides.

Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture in view of the teaching of WO '735. The suggestion or motivation for doing so would have been to convert synthesis gas into hydrocarbons in the presence of a Fischer-Tropsch catalyst (Page 1 Lines 6-10). The process of WO '735 requires a catalyst support preferably made from alumina (Page 3, Lines 1-5). Therefore, one of ordinary skill in the art would be motivated to use the support of Noweck in the process of WO '735.

**Claims 1, 20-31, 33-70, 73-79, and 81-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murrell US 4831007 as applied to claims 1, 20-31, and 33-41 above, and further in view of WO 01/76735.**

Murrell does not expressly state teach a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b)

optionally, introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) optionally, introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) optionally, drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture.

WO '735 teaches a method for preparing a Fischer-Tropsch catalyst (Abstract) comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (Page 1) (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (Page 3) (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (Page 4 Lines 18-20) (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions



effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides (Page 4 Lines 12-17). Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture (Table 1).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Murrell to include a method for preparing a Fischer-Tropsch catalyst comprising: (a) introducing at least one catalytic metal precursor to a stabilized transition alumina catalyst support to provide a catalyst-impregnated support; (b) introducing at least one cocatalytic metal precursor to the catalyst-impregnated support to provide a cocatalyst-impregnated support; (c) introducing at least one promoter precursor to the cocatalyst-impregnated support to provide a promoter-impregnated support; (d) drying the catalyst-impregnated support at conditions effective for removing any solvents used in introducing at least one of the precursors of steps (a), (b) and (c), wherein drying provides a dried catalyst-impregnated support; and (e) calcining the catalyst-impregnated support at conditions effective for decomposing at least one of the precursors of steps (a), (b) and (c) to the corresponding oxides. Wherein the catalyst is used for producing a product mixture comprising paraffinic hydrocarbons, comprising: contacting a reactant gas mixture comprising synthesis gas with a catalyst under conditions and in a reactor effective for at least partially transforming the synthesis gas to the product mixture in view of the teaching of WO

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'735. The suggestion or motivation for doing so would have been to convert synthesis gas into hydrocarbons in the presence of a Fischer-Tropsch catalyst (Page 1 Lines 6-10). The process of WO '735 requires a catalyst support preferably made from alumina (Page 3, Lines 1-5). Therefore, one of ordinary skill in the art would be motivated to use the support of Noweck in the process of WO '735.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fiorito whose telephone number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

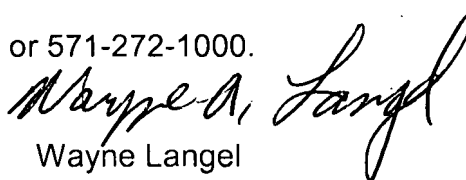
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James Fiorito  
Patent Examiner  
AU 1754

JF

  
Wayne Langel  
Primary Patent Examiner  
AU 1754